FIG. 1

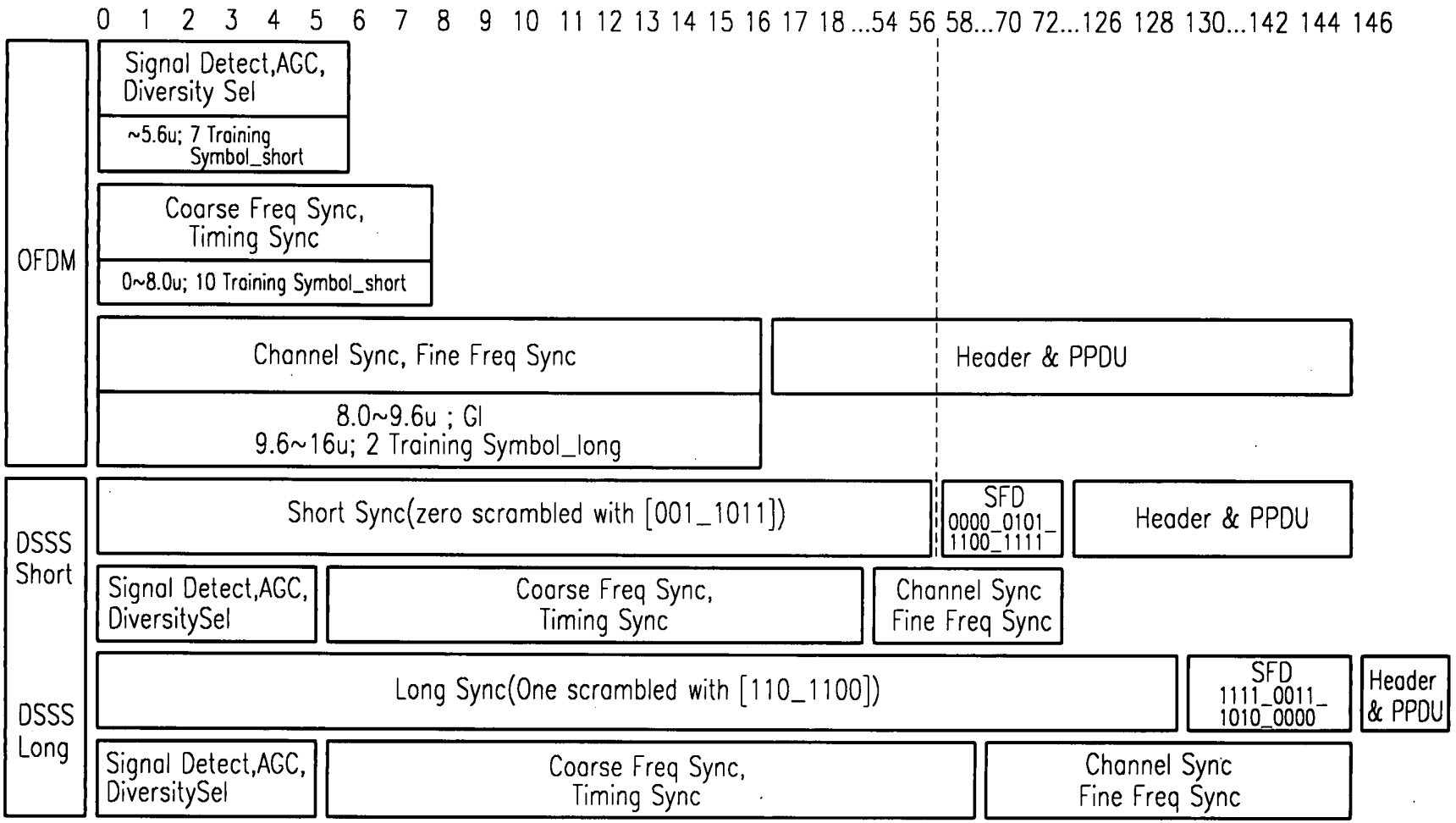

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 ...54 56 58...70 72...126 128 130...142 144 146
OFDM
Signal Detect,AGC, Diversity Sel
~5.6u; 7 Training Symbol_short
Coarse Freq Sync, Timing Sync
0~8.0u; 10 Training Symbol_short
Channel Sync, Fine Freq Sync
8.0~9.6u ; GI
9.6~16u; 2 Training Symbol_long
Header & PPDU
DSSS Short
Short Sync(zero scrambled with [001_1011])
SFD 0000_0101_ 1100_1111
Header & PPDU
Signal Detect,AGC, DiversitySel
Coarse Freq Sync, Timing Sync
Channel Sync Fine Freq Sync
DSSS Long
Long Sync(One scrambled with [110_1100])
SFD 1111_0011_ 1010_0000
Header & PPDU
Signal Detect,AGC, DiversitySel
Coarse Freq Sync, Timing Sync
Channel Sync Fine Freq Sync

FIG. 2

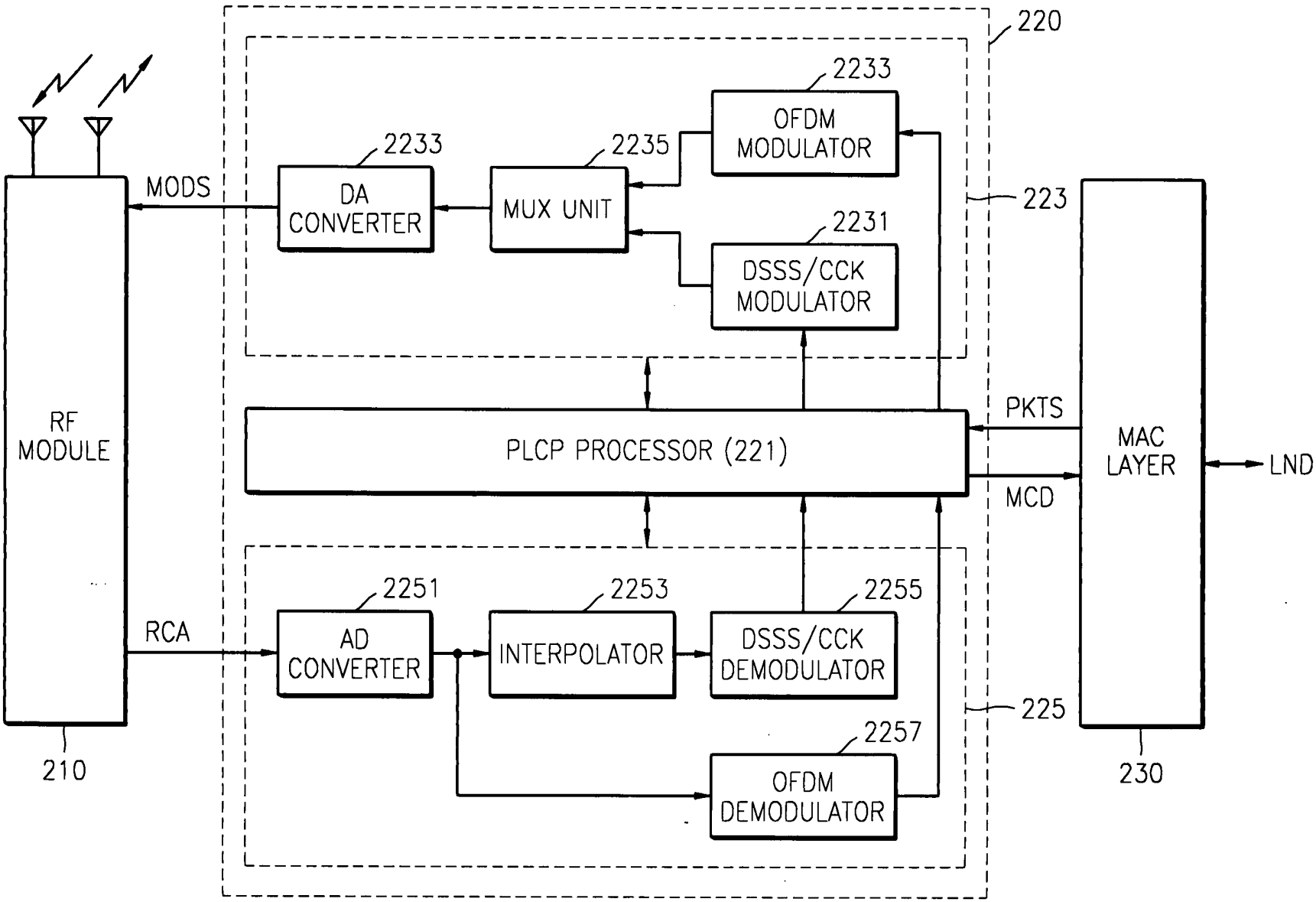

220
2233
OFDM MODULATOR
2233
DA CONVERTER
2235
MUX UNIT
2231
DSSS/CCK MODULATOR
223
MODS
RF MODULE
PLCP PROCESSOR (221)
PKTS
MCD
MAC LAYER
LND
2251
AD CONVERTER
2253
INTERPOLATOR
2255
DSSS/CCK DEMODULATOR
RCA
225
2257
OFDM DEMODULATOR
210
230

FIG. 3A

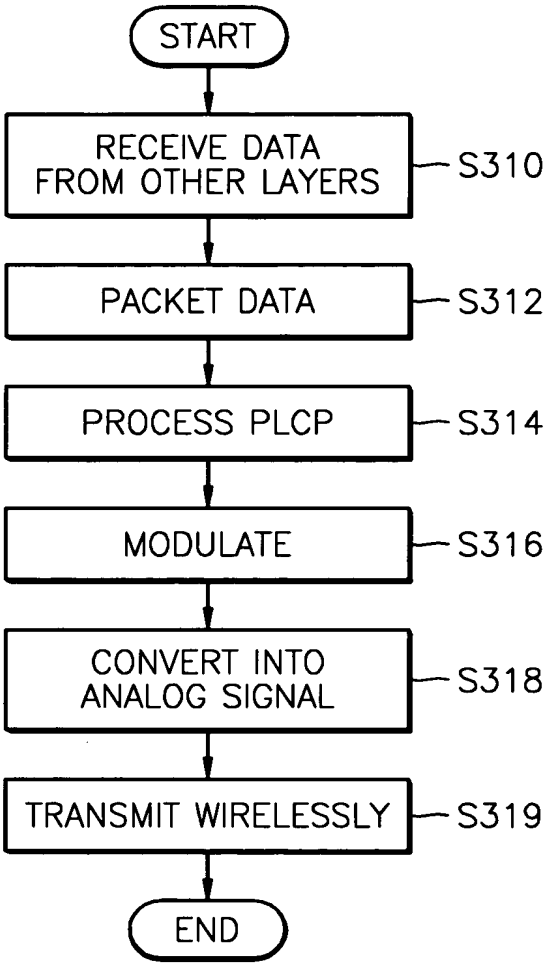

START
RECEIVE DATA FROM OTHER LAYERS
S310
PACKET DATA
S312
PROCESS PLCP
S314
MODULATE
S316
CONVERT INTO ANALOG SIGNAL
S318
TRANSMIT WIRELESSLY
S319
END

FIG. 3B

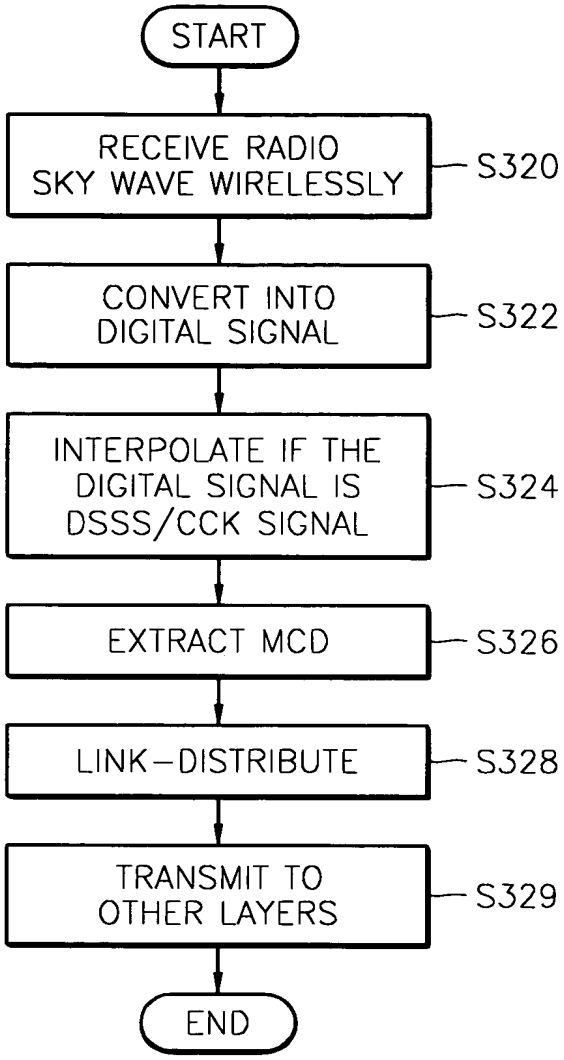

START
RECEIVE RADIO SKY WAVE WIRELESSLY
S320
CONVERT INTO DIGITAL SIGNAL
S322
INTERPOLATE IF THE DIGITAL SIGNAL IS DSSS/CCK SIGNAL
S324
EXTRACT MCD
S326
LINK-DISTRIBUTE
S328
TRANSMIT TO OTHER LAYERS
S329
END

FIG. 4

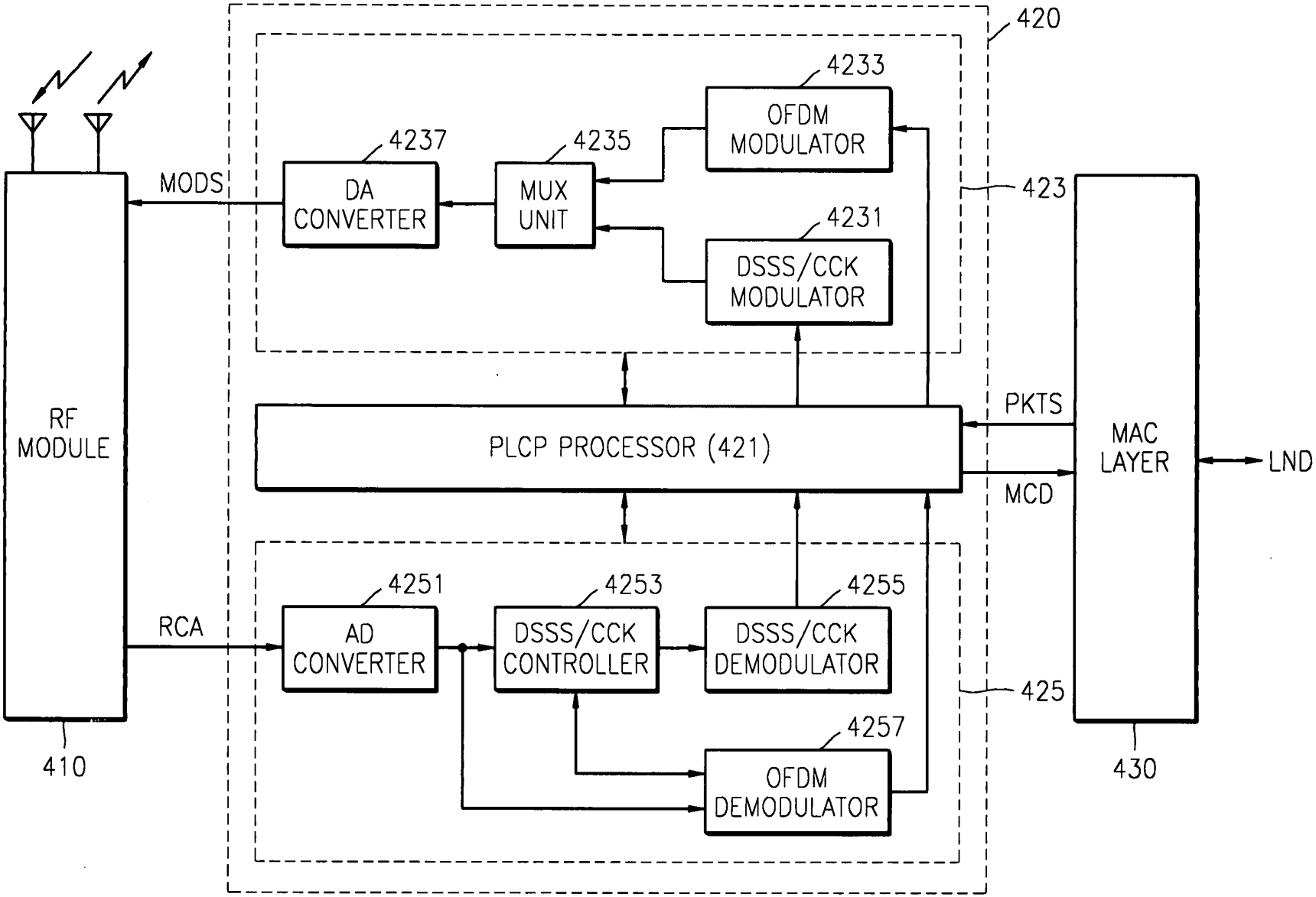

420
4233
OFDM MODULATOR
4237
4235
DA CONVERTER
MUX UNIT
MODS
423
4231
DSSS/CCK MODULATOR
RF MODULE
PLCP PROCESSOR (421)
PKTS
MAC LAYER
LND
MCD
4251
4253
4255
AD CONVERTER
DSSS/CCK CONTROLLER
DSSS/CCK DEMODULATOR
RCA
425
4257
OFDM DEMODULATOR
410
430

FIG. 5

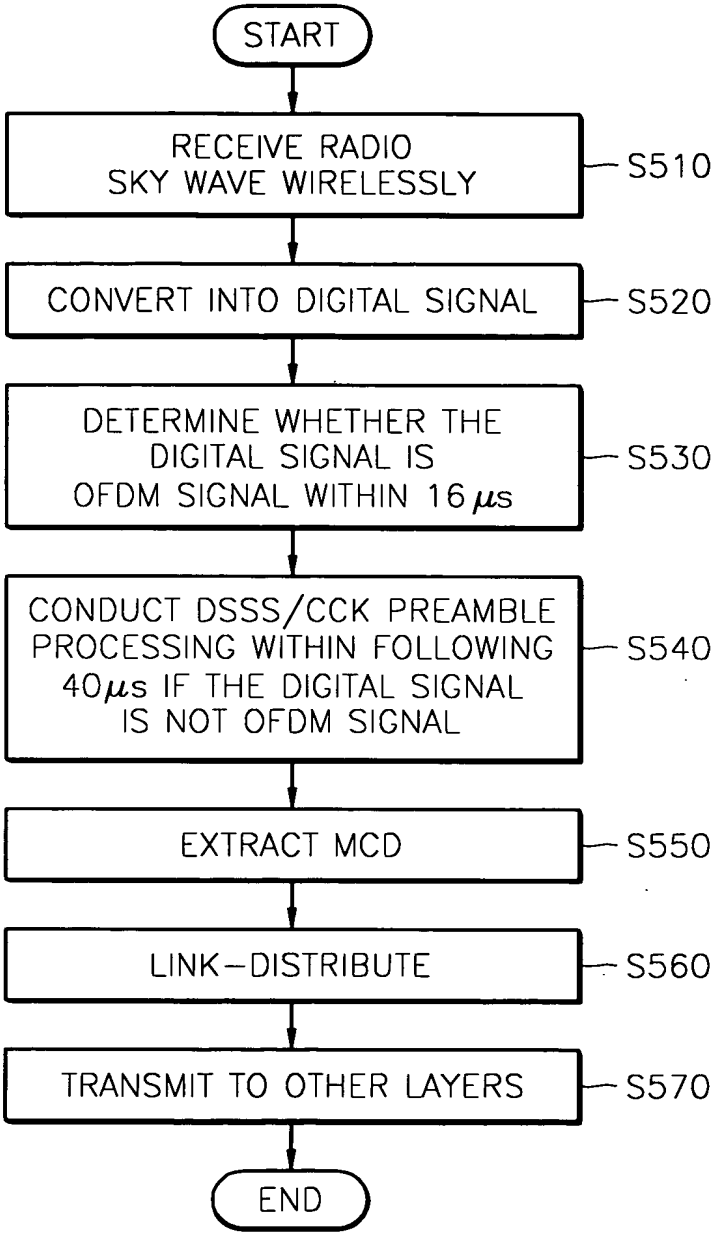
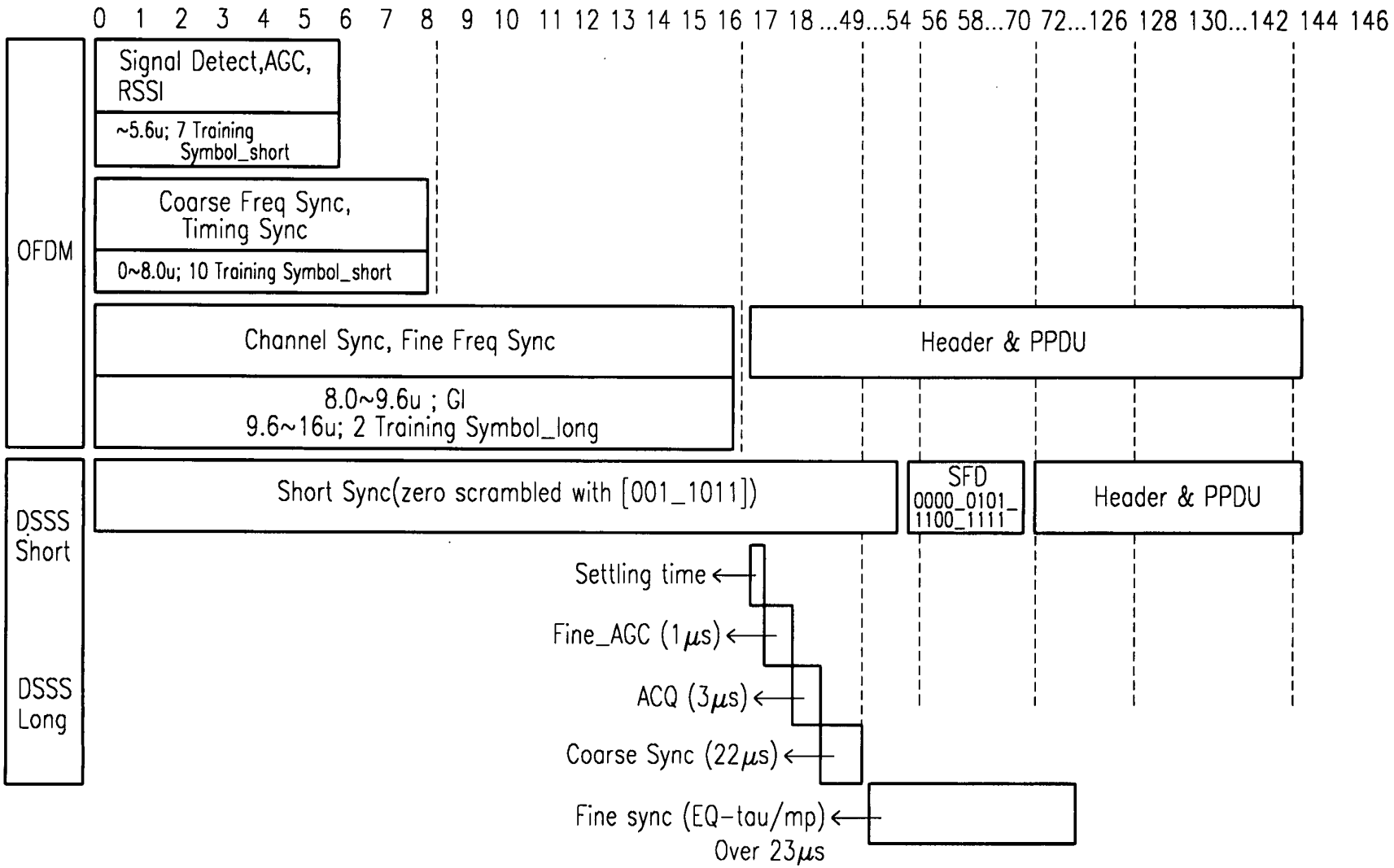

START
RECEIVE RADIO SKY WAVE WIRELESSLY
S510
CONVERT INTO DIGITAL SIGNAL
S520
DETERMINE WHETHER THE DIGITAL SIGNAL IS OFDM SIGNAL WITHIN 16 μs
S530
CONDUCT DSSS/CCK PREAMBLE PROCESSING WITHIN FOLLOWING 40μs IF THE DIGITAL SIGNAL IS NOT OFDM SIGNAL
S540
EXTRACT MCD
S550
LINK-DISTRIBUTE
S560
TRANSMIT TO OTHER LAYERS
S570
END

FIG. 6


0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 ...49...54 56 58...70 72...126 128 130...142 144 146
OFDM
Signal Detect,AGC, RSSI
~5.6u; 7 Training Symbol_short
Coarse Freq Sync, Timing Sync
0~8.0u; 10 Training Symbol_short
Channel Sync, Fine Freq Sync
8.0~9.6u ; GI
9.6~16u; 2 Training Symbol_long
Header & PPDU
DSSS Short
DSSS Long
Short Sync(zero scrambled with [001_1011])
SFD 0000_0101_ 1100_1111
Header & PPDU
Settling time
Fine_AGC (1μs)
ACQ (3μs)
Coarse Sync (22μs)
Fine sync (EQ-tau/mp) Over 23μs